DISCUSSION
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In symptomatic PCT positive cases, 31 had premalignant histology. Endometrial hyperplasia (25) and cell hyperplasia (6), Flase positive were 26%. In PCT negative group, false negative was 25%. These 25% of cases could be missed by PCT. If we take out of 50 cases the false negative would be only 4% and again false positive would be 22%. This shows that 96% of whole population could be screened with PCT and 4% would be left. In consideration with the cost of investigation, PCT would be an ideal investigation for screening main whole population for endometrial carcinoma as it detects 96% of cases. False positive of 22% is a bit high but these cases could go for endometrial biopsy.

In asymptomatic PCT negative cases, no patient had premalignant histology showing that in them. PCT negativity was 100% of their having normal endometrium. False positive was seen in 4 cases giving 40%. But we take out of 50 cases then false positive would be 8% which is small and these cases go for endometrial biopsy. Incidence of endometrial and stromal cell hyperplasia in our study in symptomatic group was 64% and in asymptomatic group it was 12%.

If both the groups were combined, the incidence was 39%. Sutherland (1961) reported an incidence of 39.4%. Solapurkar (1983) reported an incidence of 42.85% of endometrial hyperplasia. In symptomatic group the incidence according to the present study being 64%, is a bit high.
In the present study, the patients were in the age group of 45 to 65 years. The mean age in asymptomatic group was 52.5 years while in symptomatic group it was 54.5 years. In asymptomatic group the maximum number of cases were in the age group of 51-55 years i.e. 22(44%) cases. In symptomatic group also maximum number of cases were in the age group of 51-55 years, was followed by 20(40%) cases in asymptomatic and 13(26%) cases in symptomatic group in the age group of 45-50 years. There was no case below the age of 40 years in both the groups. Similar type of age pattern was observed by Marks and Isacies (1981) and Koss et al (1981). Maximum number of patients were found in the age group of 50-59 years. So this period seems to be susceptible to develop endometrial premalignancy or malignancy.

In asymptomatic group, maximum number of cases having premalignant histology (5 cases) belonged to the age group of 51-55 years. In symptomatic group, 20 cases had premalignant histology and 4 cases had normal histology in the age group of 51-55 years.

**TABLE XXII:** Showing the incidence of endometrial hyperplasia and adenocarcinoma with age in different series.

<table>
<thead>
<tr>
<th>Name of author</th>
<th>Premalignant</th>
<th>Malignant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sippe, 1962</td>
<td>46-55</td>
<td>60-70</td>
</tr>
<tr>
<td>Cambrell</td>
<td>-</td>
<td>7-55</td>
</tr>
<tr>
<td>Koss et al, 1981</td>
<td>45-55</td>
<td>60-70</td>
</tr>
<tr>
<td>Present study, 1998</td>
<td>51-55</td>
<td>-</td>
</tr>
</tbody>
</table>
In the present study, in asymptomatic group 35 cases had their weight in the range of 40-50 kg and 10 cases in the range of 51-60 kg and 5 cases in the range of 61-70 kg. In symptomatic group, 22 cases had their weight in the range of 51-60 kg and 6 cases in the range of 61-70 kg. Very few cases had their weight more than 61 kg. This might be because of the fact that obesity is rare to be found in this belt of country. But it could be seen that 30% of cases had their weight more than 51 kg in asymptomatic group whereas in symptomatic group it was 56%. Koss et al (1981) have shown that overweight is associated with some abnormality of genital tract.

Way (1947), Peterson (1960), Gusberg (1975) and Cambrell (1980) showed that increased weight is an important risk factor for endometrial carcinoma. Cambrell (1976) stated that the risk for endometrial carcinoma in large and obese women has been known for many years.

In asymptomatic group in the present study 6(17%) cases had premalignant histology of endometrium having their weight more than 51 kg whereas in symptomatic group 21(42%) cases had premalignant histology of endometrium who had their weight more than 51 kg. Mc Donald and co-workers (1974) studied 38 postmenopausal patients varying in body weight from 29 to 430 pounds and found a direct and highly significant correlation in the metabolic rate of conversion of androstenedione to estroene with increasing weight. Gusberg and Hale (1961) showed that cancer of the body of the uterus has definite relationship with obesity.
In the present study, 2(4%) cases of asymptomatic group had diastolic blood pressure (DBP) more than 90 mm Hg and 5 symptomatic (10%) cases had DBP more than 90 mm Hg. Hanna et al (1983) reported 30% patients with hypertension. In the present study there were 14% hypertensive patients.

In asymptomatic group none of the patient having more than 90 mm Hg DBP had premalignant histology of endometrium whereas in symptomatic group 4 patients had premalignant histology who had their DBP more than 90 mm Hg. Gusberg and Hall et al (1961) showed that there is definite relationship between cancer of the body of uterus and hypertension.

In asymptomatic group 4(8%) cases had their blood sugar between 121-140 mg% and 3(6%) cases more than 141 mg% and in symptomatic group 15(30%) cases had blood sugar between 121-140 mg% and 8(16%) cases had more than 141 mg%.

In asymptomatic group, 3(6%) cases had premalignant histology who had blood sugar more than 120 mg% whereas in symptomatic group, 23(46%) cases had premalignant histology who had blood sugar more than 120 mg%. Way (1942), Kaplan (1974) and Smith (1975) reported an association between high blood sugar level and development of endometrial hyperplasia. 20 cases in asymptomatic group had atrophic uterus and 22 cases had normal sized uterus, 8 cases had their uterine size 76 weeks. In symptomatic group 46(92%) had their uterine size between normal and 8 weeks whereas in asymptomatic group 28(56%) cases had their uterine size between normal and 8 wks. 20(40%) cases had atrophic uterine size in asymptomatic group whereas only 2 (4%) cases had atrophic uterine size.
This difference was because of presence of oestrogen in symptomatic group whereas in symptomatic there was withdrawal of oestrogen which causes atrophy of uterus. In asymptomatic group 2 cases with normal sized uterus had premalignant histology whereas in symptomatic group 16 cases with normal sized uterus had premalignant histology. 4 cases in asymptomatic group with 6-8 weeks sized uterus had premalignant histology whereas in symptomatic group 5 cases had premalignant histology. 2 cases with uterine size more than 8 weeks had premalignant histology whereas in asymptomatic group with uterine size more than 8 weeks none had premalignant histology.

Jeffcoat (1982) found an incidence of 30% of adenocarcinoma in patients having fibroid uterus.

In asymptomatic group, 22 cases had menopause between 1/2 to 5 years and 20 cases had between 6-10 years. Six cases between 11-15 years and only 2 cases between 16-20 years, whereas in symptomatic group 35 cases had menopause 1/2 to 5 years and 12 cases had between 6-10 years, 2 cases had between 11-15 years and only one case had menopause between 16-20 years.

In present study, it was observed that 35(70%) cases in symptomatic group as compared to 22(44%) cases in asymptomatic group had their menopause between 1/2-5 years. More patients in former group presented with bleeding per vagina. This was because of excessive production of oestrogen from adrenal cortex, ovary or peripheral conversion of androstenedione which leads to hyperplasia and sloughing of hyperplastic endometrium.
In the present study, there were 3(6%) multiparous cases in asymptomatic group as compared to 1 case in symptomatic group. 24(48%) cases were grandmultipara in asymptomatic group whereas 17(34%) cases in symptomatic group.

In asymptomatic group 26(53%) cases were 1 parity whereas in symptomatic group had lesser children as compared to asymptomatic group. Mean parity was 3.5 in symptomatic group and 4.5 was in asymptomatic group.

In the present study, 45 asymptomatic cases had attained their menopause by the age of ≥50 years whereas in symptomatic group 2 cases had attained their menopause by this age.

Five(10%) cases in asymptomatic group had attained menopause between 51-55 year whereas in symptomatic group there were 30(60%) cases. More cases in symptomatic group had late onset of menopause so these women had longer reproduction period as they were exposed to oestrogen for longer period as compared to asymptomatic group.

In asymptomatic group, 6(12%) cases had premalignant histology who attained their menopause at the age of 745 years whereas 30(60%) cases had premalignant histology who attained menopause at 745 years in symptomatic group.

Findings of present study are in agreement with many workers (Way, 1987, Gusberg, 1976, Koss et al, 1981 and Hanno et al, 1983, Jeffcoat, 1983). The risk of endometrial carcinoma was 2-4 fold in those patients who had late menopause (Gusberg, 1976).
TABLE XXIII : Showing the age of menopause in different series in relation to histological findings.

<table>
<thead>
<tr>
<th>Name of authors</th>
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<tr>
<td></td>
<td>Premalignant</td>
</tr>
<tr>
<td>May, 1947</td>
<td>46.5</td>
</tr>
<tr>
<td>Gusberg, 1951</td>
<td>45.5</td>
</tr>
<tr>
<td>Gerbrell, 1981</td>
<td>46.5</td>
</tr>
<tr>
<td>Kerr et al, 1981</td>
<td>45.49</td>
</tr>
<tr>
<td>Forbes et al, 1983</td>
<td>52.0</td>
</tr>
<tr>
<td>Present study, 1990</td>
<td>-</td>
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</tbody>
</table>

An attempt was also made to find out any correlation between PCT positivity and different variables in both the groups (asymptomatic and symptomatic). It was found that in asymptomatic group there was 6:1 ratio of chance to have abnormal endometrium in patients of more than 50 years and below the 50 years of age and that was 31:1 ratio in symptomatic group.

It was also found that in symptomatic group 8 PCT positive patients had premalignant histology where the duration of menopause was more than 5 years while in asymptomatic group only 2 patients with PCT positive had premalignant histology. Therefore, it is clear that PCT positive symptomatic patients with duration of menopause more than 5 years had greater chance to develop premalignant histology.

Similarly it was seen that 28 symptomatic PCT positive patients had premalignant histology while no patient in PCT negative group. So it is clear that overweight PCT positive and symptomatology had greater chance to develop premalignant lesion of endometrium.
In the symptomatic group with PCT positive patients with DBP 790 mm Hg, 5 cases had premalignant lesion whereas none of the patients with PCT negative had premalignant histology. So it is clear that hypertension is another risk factor in PCT positive symptomatic patients to develop premalignant histology of endometrium.

It was seen that in symptomatic group with PCT positive 11 patients had premalignant lesion of endometrium where blood sugar level was more than 121 mg%, while there was no patient in PCT negative group.

In asymptomatic group with PCT positive, 4 cases had premalignant histology of endometrium where blood sugar level was more than 121 mg% as compared to no patient in PCT negative group. Therefore, there was a definite correlation between high blood sugar levels, PCT positivity and development of premalignant lesion of endometrium in asymptomatic group also.

Seven patients in symptomatic group with more than 50 kg weight had false positive (...), but out of total 50 cases it would be 14%.

In symptomatic group, 4 patients with 720 mm Hg, had premalignant histology showed 20% false PCT positivity. But out of total 50 cases, it would be 2%. Then 2% cases went for biopsy.

If the results are interpreted in terms of these factors, an idea of about the condition for endometrium can be gathered even in those patients who others later on show PCT results to either false positive or
false negative. Once blood sugar of these patients is high one would cautioned about endometrium and endometrial biopsy is must in these patients.

Thus, from the above, it was concluded that by this simple PCT, the patients could be screened in out patient department who are likely to have malignancy or endometrium particularly in those who have already other risk factors viz. hypertension, obesity and dia...